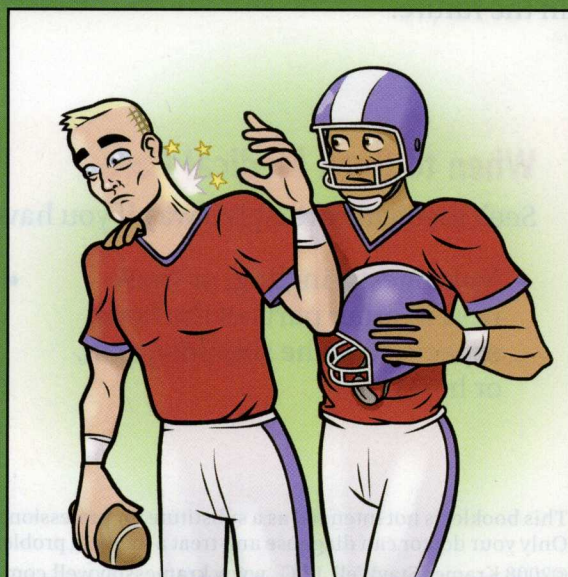
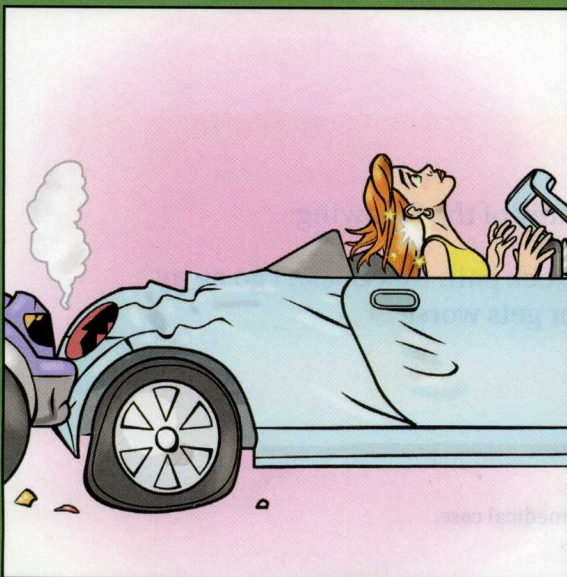
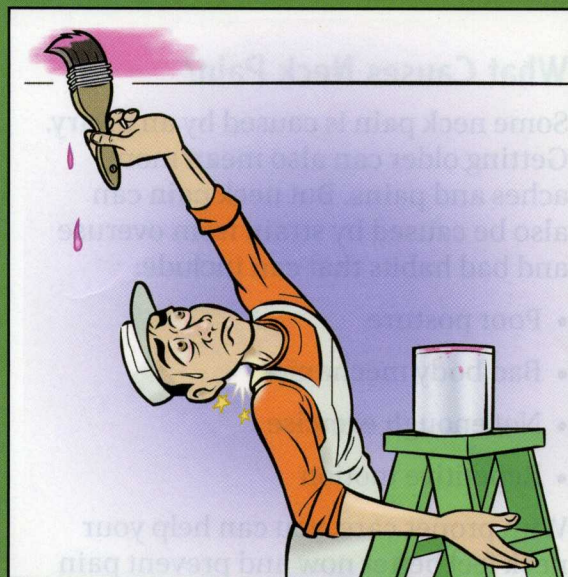
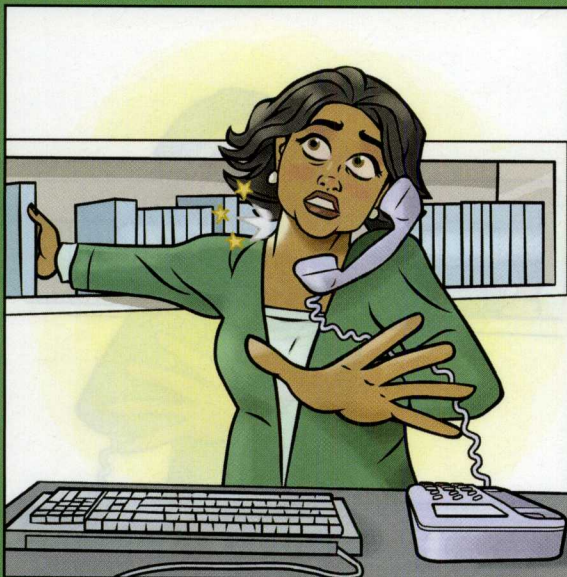


# Neck Owner's Manual

A Guide to the Care of the Neck





## A Real Pain in the Neck

If you suffer from neck pain, you're not alone. Many people have neck pain at some point in their lives. Problems such as poor posture, injury, and wear and tear can lead to neck pain. This booklet can help you learn how to care for your neck. You'll also learn ways to help relieve the pain in your neck.

### Pain Is a Problem

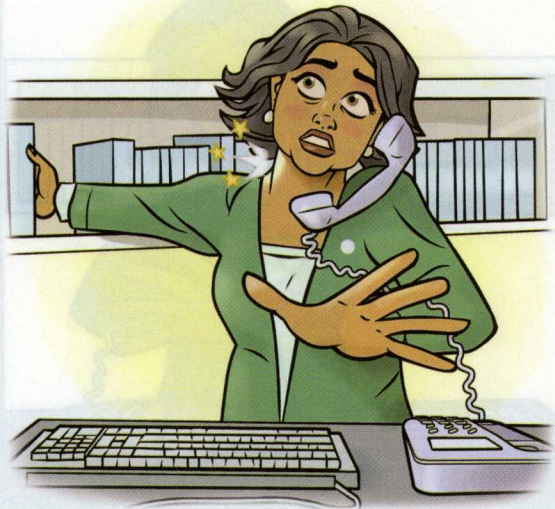
Pain is a way the body tells you that it needs attention. Like a flashing warning light in a car, neck pain tells you that there's a problem. The pain can be sharp, dull, or achy. This pain is often a result of an accident or years of poor neck health.

### What Causes Neck Pain?

Some neck pain is caused by an injury. Getting older can also mean more aches and pains. But neck pain can also be caused by strain from overuse and bad habits that can include:

- Poor posture
- Bad body mechanics
- Not enough exercise
- Repetitive motion

With proper care, you can help your neck feel better now and prevent pain in the future.



### When to Seek Medical Care

Seek medical care right away if you have any of the following:

- Numbness, tingling, or weakness in other parts of the body, especially in the shoulder, arm, or hand
- Neck pain that doesn't go away or gets worse

This booklet is not intended as a substitute for professional medical care. Only your doctor can diagnose and treat a medical problem.

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## The Road to Recovery

Resting a painful neck can feel good. But not using your neck can cause muscles to stiffen and weaken. Instead, neck exercises that stretch and strengthen your neck muscles can help you get relief. Check with your healthcare provider before trying new exercises. This way, you're sure to get started safely on the road to recovery.



## Your Goal: A Pain-Free Neck

There are things you can do to help prevent or relieve neck pain. For example, you can change habits that lead to neck pain or make it worse. Improving your posture, body mechanics, and overall health may lessen pain or even make it go away. Most people who make these changes feel better. It does take time and effort. But your goal of a pain-free neck will be well worth it.

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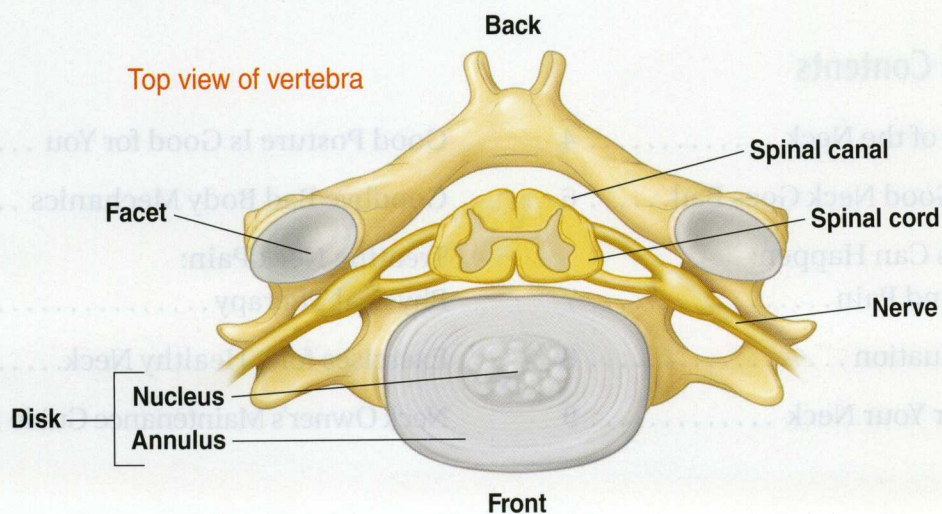
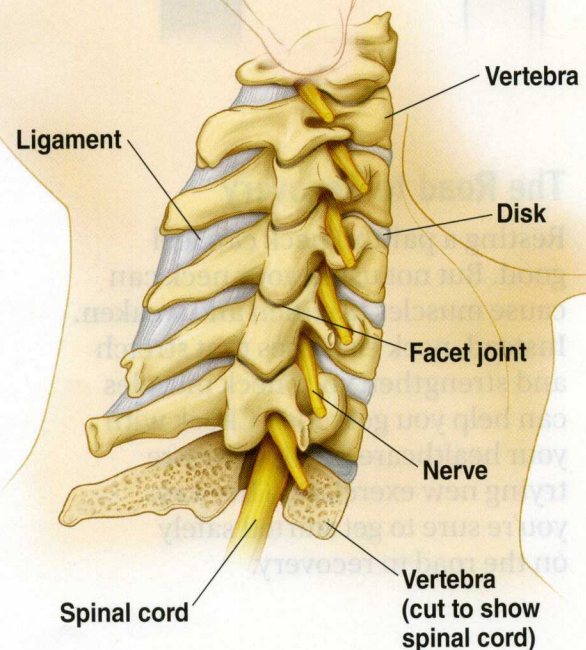


## Anatomy of the Neck

A healthy neck lets the head, shoulders, and arms move freely. Strong neck muscles help support the head and keep the spine aligned for good posture. When the neck is healthy, it can move without causing pain.

### Inside the Neck

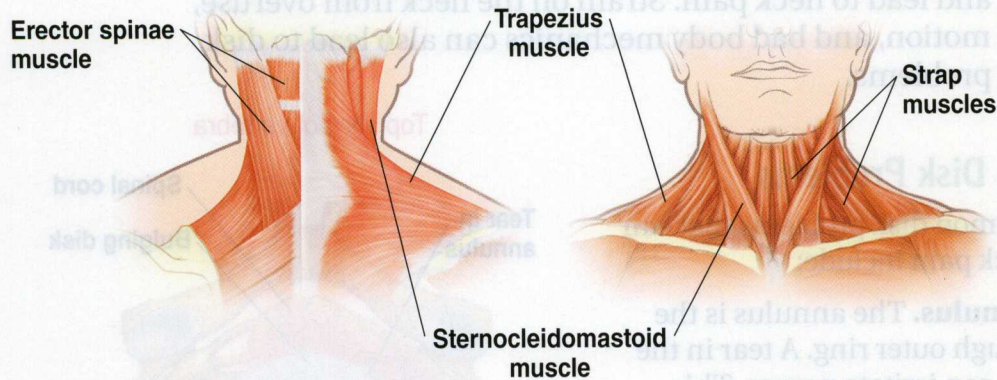
- **Vertebrae** are bones that stack together to make up the spine. The neck is made up of the spine's first seven vertebrae.
- **Disks** (strong pads of tissue) lie between the vertebrae to cushion them. Each disk has a tough outer ring (**annulus**) and a rubbery center (**nucleus**).
- **Facet joints** are where vertebrae fit together. The joints are lined with smooth tissue (cartilage) that allows vertebrae to move easily.
- **Ligaments** connect vertebrae together and help hold them in place.
- The **spinal canal** is a tunnel created by the stacked vertebrae. The **spinal cord** runs through the spinal canal and connects to the brain. Nerves branch from the spinal cord through openings on either side of the spinal canal.





Back view of neck muscles

Front view of neck muscles

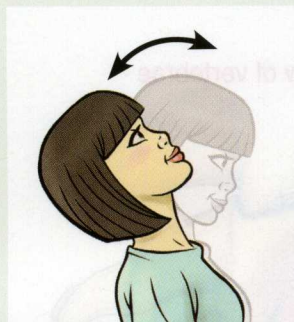


## Muscles of the Neck

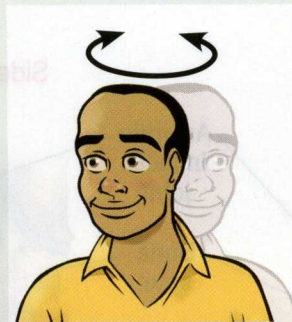
Neck muscles work with muscles in the shoulders, chest, and back to hold up the head. These muscles hold vertebrae in place and help you move freely. Keeping all these muscles strong and flexible helps support the bones, joints, and ligaments in your neck. Reducing stress and strain on these muscles can also help keep your neck pain-free.

## How the Neck Moves

The head and neck move in three basic ways: flexion and extension, rotation, and lateral bending. How far you can move in each direction is your **range of motion**. To avoid injury, stay within a range of motion that's comfortable for you.



**Flexion** is dropping your head forward. **Extension** is bending it backward.



**Rotation** is turning your head from side to side.



**Lateral bending** is bending your head toward your shoulder.



## When a Good Neck Goes Bad

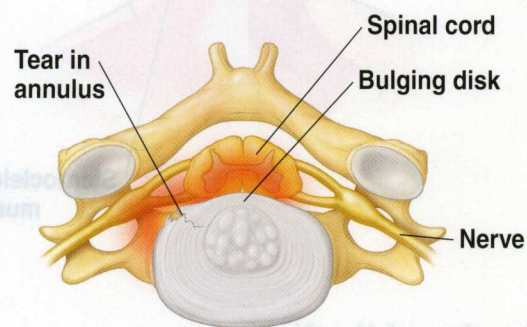
A healthy neck can become unhealthy for many reasons. For example, aging can cause wear and tear on the disks and vertebrae and lead to neck pain. Strain on the neck from overuse, repetitive motion, and bad body mechanics can also lead to disk and bone problems.

### Common Disk Problems

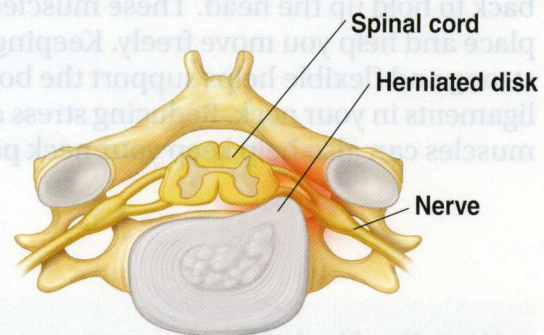
Some common disk problems that can lead to neck pain include:

- **Torn annulus.** The annulus is the disk's tough outer ring. A tear in the annulus can irritate nerves. This can cause neck pain.
- **Bulging or herniated disk.** If the annulus weakens or tears, the disk can bulge outward. The bulge can then press on a nerve and cause pain.
- **Disk degeneration.** Disks can thin out (degenerate) over time. Flattened disks don't cushion vertebrae well and can cause vertebrae to rub together. Rubbing vertebrae can pinch nerves, leading to pain.

Top view of vertebra



Top view of vertebra

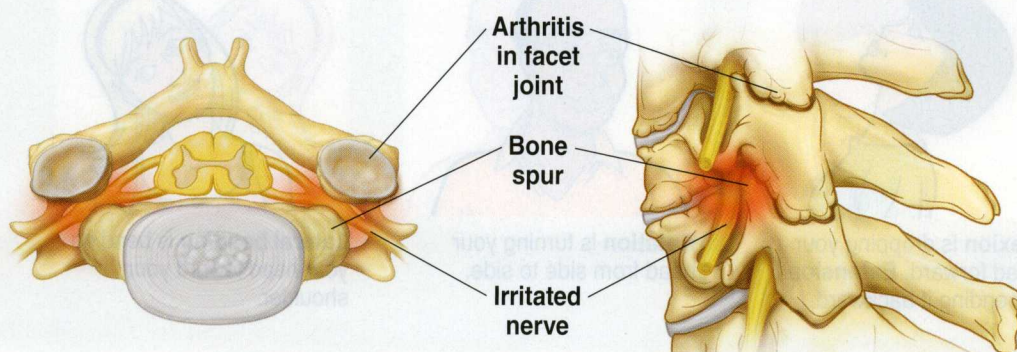


### Common Bone Problems

Over time, the lining of smooth cartilage on joints can wear out. This is called **arthritis**. Arthritis can cause pain, swelling, and stiffness in the neck. Arthritis in facet joints makes it harder to move the neck without pain. Rubbing vertebrae can also cause growths of bone (bone spurs) to form. If bone spurs press on nerves, pain can result.

Top view of vertebra

Side view of vertebrae



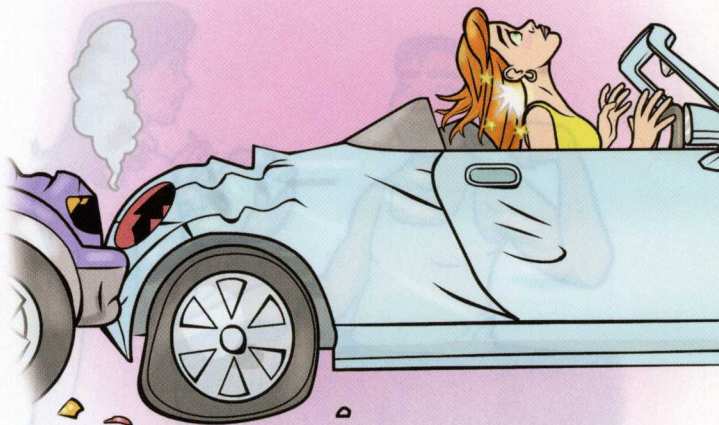


## Accidents Can Happen: Injuries and Pain

Certain types of accidents can result in painful neck injuries. These accidents often occur while driving or playing sports. The neck is injured because it is forced past its normal range of motion. These injuries include whiplash, strains, and sprains.

### Whiplash

Whiplash is injury to different parts of the neck, such as muscles, ligaments, or joints. The most common cause of whiplash is a car accident. But it can also happen during a fall or sports injury. Whiplash can result when an impact throws the head, forcing the neck too far forward (**hyperflexion**), then too far backward (**hyperextension**). When combined, the two motions can cause a painful whiplash injury.

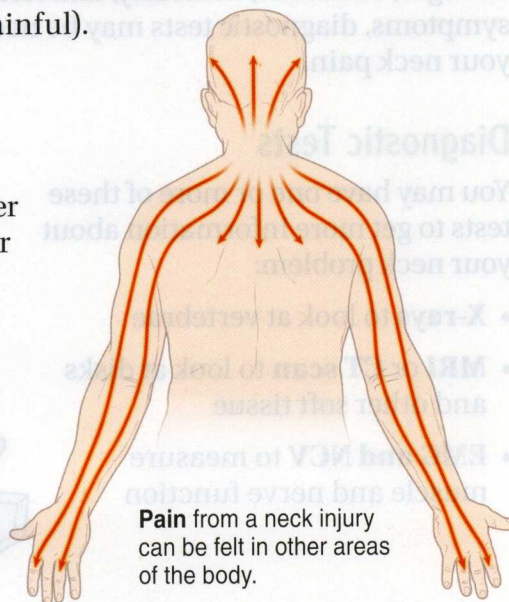


### Strains and Sprains

Strains (stretched or torn muscles) and sprains (stretched or torn ligaments) can cause neck pain. Strains and sprains can occur during an accident or when the neck is overused through repetitive motion. They can also cause muscles and ligaments to become inflamed (swollen and painful).

### Pain in Other Areas of the Body

Pain from a neck injury is sometimes felt in other areas of the body, such as the shoulders or upper back. For example, a neck injury can cause headaches. Pain, numbness, or tingling in the upper back, arms, or hands also can result. Talk to your healthcare provider if you have pain in areas other than your neck. It may be caused by your neck condition.



Pain from a neck injury can be felt in other areas of the body.



## Your Evaluation

A medical evaluation can help find the cause of your neck pain. It can also help your healthcare provider decide on the best treatment for you. The evaluation may include a health history, physical exam, and diagnostic tests.



## Health History

Questions the healthcare provider may ask you include:

- Where is your pain? How often does it bother you?
- How and when did your pain start?
- What relieves the pain? What makes it worse?
- What kind of work do you do? What are your hobbies?
- How does neck pain affect your life?

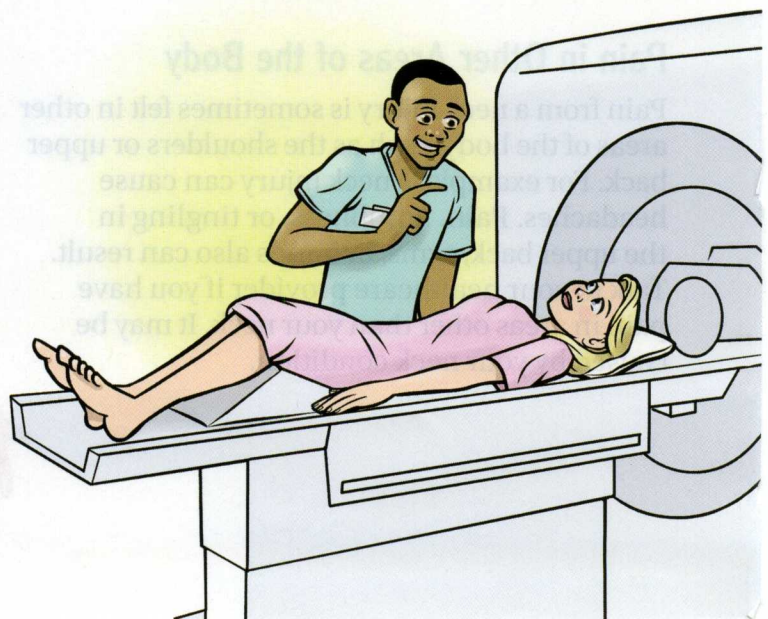
## Physical Exam

Your healthcare provider can learn a lot by looking at your neck in different positions. He or she may check your posture, muscle strength, sensation, flexibility, and reflexes. Depending on your symptoms, diagnostic tests may be needed to find the cause of your neck pain.

## Diagnostic Tests

You may have one or more of these tests to get more information about your neck problem:

- **X-rays** to look at vertebrae
- **MRI or CT scan** to look at disks and other soft tissue
- **EMG and NCV** to measure muscle and nerve function





## Caring for Your Neck

Inflammation and swelling of neck muscles can cause neck pain. This can also trigger spasms (sudden tightening of muscles) in the neck. These can make pain even worse. There are steps you can take to help relieve neck pain at home.

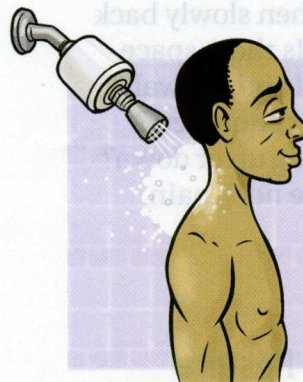
### Home Relief for Neck Pain

Pain can end quickly or last awhile. Either way, you'll want relief as soon as possible. Your healthcare provider can tell you which treatments to do at home to help relieve your pain.

- **Lying down** for a short time takes pressure from the head off the neck.
- **Ice and heat** can help reduce pain. To bring down swelling, rest an ice pack wrapped in a thin towel on your neck. To relax sore muscles, apply a warm, wet towel to the area. Or take a warm bath or shower.
- **Over-the-counter medications**, such as ibuprofen, aspirin, naproxen, and acetaminophen, can help reduce swelling. Use these only as directed.
- **Exercises** can relax muscles and prevent stiffness. To prepare, drape a warm, wet towel around your neck and shoulders. Remove the towel. Then do the range-of-motion exercises in this booklet as directed by your doctor.



Ice brings down swelling.



Heat relaxes sore muscles and helps relieve spasms.

## Relieving Stress

Stress can cause physical reactions, such as tense neck muscles or spasms. The following can help keep stress in check:

- **Get enough sleep.** When you're tired, it's harder to cope with stress. To help you sleep, try reading or listening to soothing music before bed.
- **Eat right.** Good food choices help make your body healthier. A healthy body is better able to deal with stress.
- **Be active.** To reduce stress, try to walk, jog, or swim on most days. Yoga and tai chi may also help you relax.
- **Breathe deeply.** Inhale through the nose. Take in as much air as you can, while pushing out your lower belly. Then exhale slowly through your mouth until your lungs feel empty. Do this 3 to 5 times, or until you feel relaxed.



## Good Posture Is Good for You

Posture is the way you hold your body. Poor posture can lead to neck problems. It keeps muscles from properly supporting the neck and puts pressure on disks, ligaments, and joints. As a result, injury and pain can occur. Practice good posture to help keep your neck healthy and pain-free.

## Poor Posture Hurts Your Neck

Many of us have poor posture. For some, it feels natural to hunch over, thrust the chin forward, or slouch the shoulders. But doing these things puts a lot of stress and strain on the neck. Be sure to check your posture and change any poor posture habits that are hurting your neck.

## Checking Your Posture

Use a full-length mirror to help check your posture. To begin, stand normally. Then slowly back up against a wall. Is there space between your head and the wall? Do you slouch your shoulders? Is your chin pointing up or down? All these can cause neck pain and injury.



## Improving Your Posture

Follow these steps to improve your posture:

- Breathe deeply.
- Pull your shoulders back.
- Think of the ears, shoulders, and hips as a series of dots. Now, adjust your body to connect the dots in a straight line.
- Keep your chin level.





## Goodbye Bad Body Mechanics

The way you move and position your body during daily activities is called **body mechanics**. Good body mechanics helps protect the neck. This means learning the right ways to stand, sit, and even sleep. So do what's best for your neck and say goodbye to bad body mechanics once and for all.

### Standing

To protect your neck while standing:

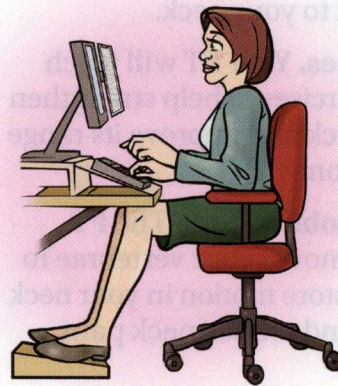
- Carry objects close to your body.
- Keep your ears and shoulders in a line while standing or walking.
- To lower yourself, bend at the knees with a straight back. Do this instead of looking down and reaching for objects.
- Work at eye level. Don't reach above your head or tilt your head back.



### Sitting

To protect your neck while sitting:

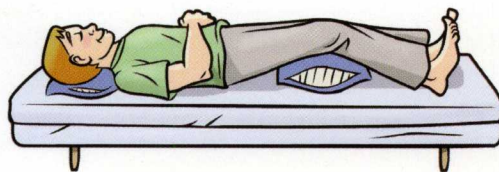
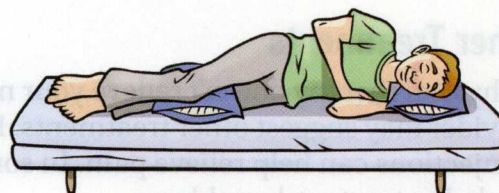
- Set up your workstation so your monitor is at or below eye level. Also, use a document holder when viewing papers or books.
- Keep your knees at or slightly below the level of your hips.
- Sit up straight, with feet flat on the floor. If feet don't touch the floor, use a footrest.
- Avoid sitting or driving for long periods. Take frequent breaks.



### Sleeping

To protect your neck while sleeping:

- Sleep on your back with a pillow under your knees, or on your side with a pillow between bent knees to align the spine.
- Avoid using pillows that are too high or too low. Instead, use a neck roll or pillow under your neck while you sleep.
- Sleep on a mattress that supports you, with a pillow under your neck.



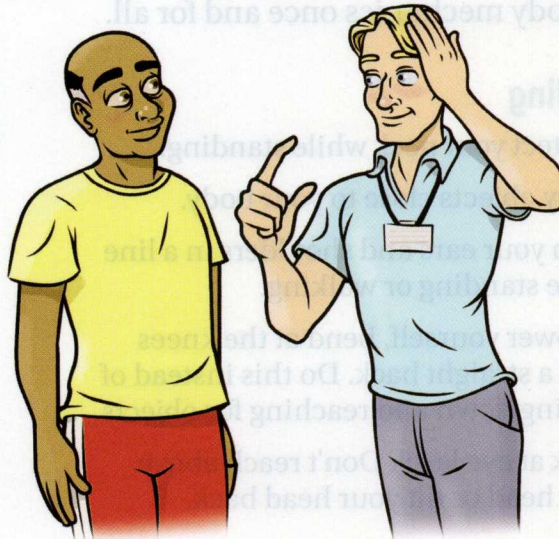


## Treating Neck Pain: Physical Therapy

If self-care treatments aren't helping relieve neck pain, your healthcare provider may suggest one or more sessions of physical therapy. Medications or other treatments also can be helpful for treating neck problems.

### Physical Therapy for Your Neck

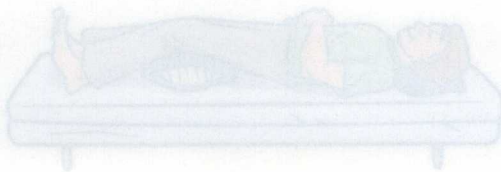
Physical therapy is performed by a specialist trained to treat injuries. Your physical therapist (PT) will teach you how to strengthen muscles, improve the spine's alignment, and help you move properly. Treatment methods used in physical therapy may include:



- **Heat.** A special heating pad called a neck pack may be applied to your neck.
- **Exercises.** Your PT will teach you exercises to help strengthen your neck and improve its range of motion.
- **Joint mobilization.** The PT gently moves your vertebrae to help restore motion in your neck joints and reduce neck pain.
- **Soft tissue mobilization.** The PT massages and stretches the muscles in your neck and shoulders.
- **Electrical stimulation.** Electrical impulses are applied to your neck. This helps reduce soreness and inflammation.
- **Education in body mechanics.** The PT shows you ways to move your body that protect the neck.

### Other Treatments

If physical therapy doesn't relieve your neck pain, your healthcare provider may suggest other treatments. For example, medications or injections can help relieve pain. In some cases, surgery may be needed to treat neck problems.





## Exercises for a Healthy Neck

When neck muscles are strong, the neck is supported and can move naturally. On the following pages are examples of exercises you can do to strengthen and stretch your neck muscles. Move slowly as you exercise and don't force your neck into position. And don't overdo it!

**NOTE:** Do these exercises only if instructed by your healthcare provider.

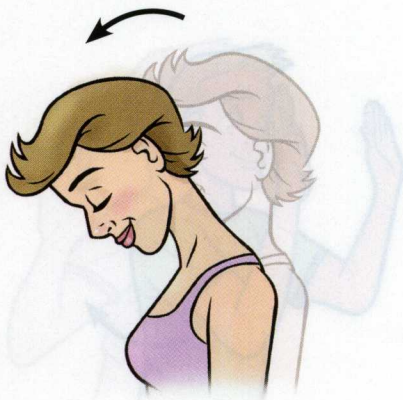
### Play It Smart: Tips for Safe Neck Exercises

- If you are recovering from a neck problem, do only the exercises prescribed by your healthcare provider. If instructed, do the exercises in this booklet daily. You might take 15 minutes in the morning and 15 minutes in the evening.
- Don't hold your breath during exercises. Breathe normally.
- You may have some discomfort. But stop immediately if you feel pain, tingling, or numbness or if you feel dizzy, lightheaded, or sick to your stomach. Then talk to your healthcare provider.

### Range-of-Motion Exercises

Range-of-motion exercises stretch neck muscles. Gently do the following exercises. **Never force your neck into position.**

#### Flexion



1. Slowly drop your chin toward your chest. Only go as far as is comfortable.
2. Hold for \_\_\_\_\_ seconds.
3. Return your head to the starting position.
4. Repeat exercise \_\_\_\_\_ times.

#### Extension



1. Gently tilt your head backward as far as is comfortable.
2. Hold for \_\_\_\_\_ seconds.
3. Return your head to the starting position.
4. Repeat exercise \_\_\_\_\_ times.

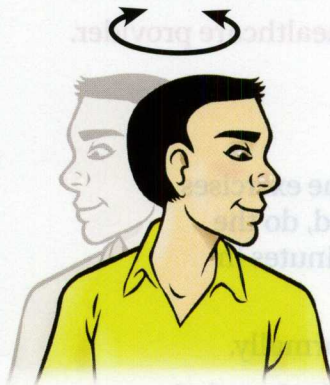
**NOTE:** Only do this exercise if instructed by your healthcare provider.



## Range-of-Motion Exercises (Continued)

Remember: Move slowly and don't force your neck into position.

### Rotation



1. Slowly turn your head to the right as far as is comfortable.
2. Hold for \_\_\_\_\_ seconds.
3. Return your head to the center.
4. Now gently turn your head to the left and hold for \_\_\_\_\_ seconds.
5. Repeat exercise \_\_\_\_\_ times on each side.

### Side Bend



1. Gently tilt your head toward your left shoulder.
2. Hold for \_\_\_\_\_ seconds.
3. Return your head to the starting position.
4. Now slowly tilt your head toward the right shoulder and hold for \_\_\_\_\_ seconds.
5. Repeat exercise \_\_\_\_\_ times.

### Chin Glide



1. Hold your head and neck straight.
2. Slightly tuck your chin into your neck. Glide your neck back so the ears are over the shoulders.
3. Hold for \_\_\_\_\_ seconds.
4. Return your head and neck to the starting position and rest.
5. Repeat exercise \_\_\_\_\_ times.

### Shoulder Blade Squeeze



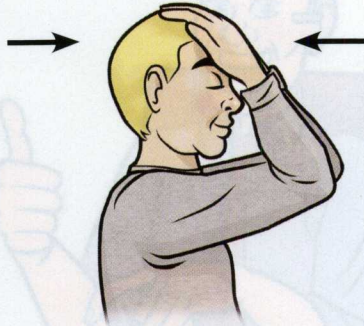
1. Lift your arms and bend your elbows. The upper arms should be at or just below shoulder level. Your palms should face forward.
2. Slowly move your arms back, squeezing your shoulder blades together.
3. Hold for \_\_\_\_\_ seconds. Relax.
4. Repeat exercise \_\_\_\_\_ times.



## Isometric Exercises

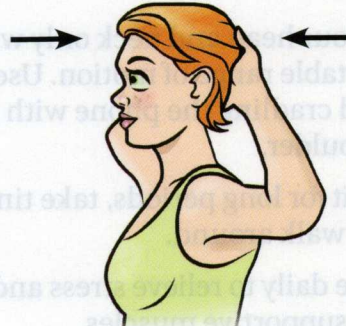
Isometric exercises strengthen neck muscles. Do the following exercises slowly. Do not force your neck into position.

### Forward Head Press



1. Gently press your palms against your forehead. Push your head forward using the muscles in your neck.
2. Hold for \_\_\_\_\_ seconds. Relax.
3. Repeat exercise \_\_\_\_\_ times.

### Backward Head Press



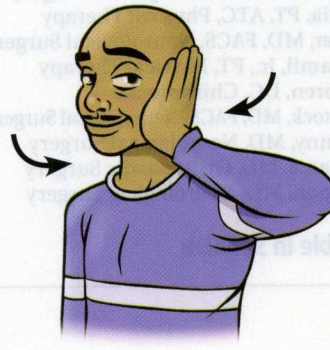
1. Gently press your palms against the back of your head. Push your head backward using the muscles in your neck.
2. Hold for \_\_\_\_\_ seconds. Relax.
3. Repeat exercise \_\_\_\_\_ times.

### Side Head Press



1. Gently press your right palm against the right side of your head. Push your head sideways using the muscles in your neck.
2. Hold for \_\_\_\_\_ seconds. Relax.
3. Repeat exercise \_\_\_\_\_ times.
4. Switch sides and repeat.

### Rotation Head Press



1. Gently press your left palm against the left side of your head.
2. Resisting with the muscles in your neck, gently try to turn your head to your left. Do not allow your head or hand to move.
3. Repeat exercise \_\_\_\_\_ times.
4. Switch sides and repeat.



## Neck Owner's Maintenance Guide

Do the following to promote good neck health:

- Set up your computer monitor so that it's at or below eye level.
- Maintain neck health by practicing proper posture.
- Move your head and neck only within a comfortable range of motion. Use a headset to avoid cradling the phone with your neck and shoulder.
- If you sit for long periods, take time to get up and walk around.
- Exercise daily to relieve stress and build strong, supportive muscles.
- Sleep on a mattress that supports your neck. Avoid using pillows that are too high or too low. And don't lie on your stomach.
- If you smoke, quit. Your healthcare provider can get you information about quitting.
- Always talk to your healthcare provider about concerns you may have about the health of your neck.



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